ORIGINAL CONTRACT RETURN TO FINANCE DEPT.

CITY OF CINCINNATI Professional Agreement

Instream Biological and Water Quality Assessment

Contract No. 65x 12225

THIS AGREEMENT is derived from the award recommendation of the evaluation team which reviewed RFQ 2016-007. It is made and entered into on the Effective Date (as defined on the signature page hereof) by and between the City of Cincinnati through its Department of Sewers (the "City") as the sole management agency for the operation and maintenance of the sewer system on behalf of the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, Ohio, hereinafter "MSDGC" and Midwest Biodiversity Institute, Inc., an Ohio corporation, hereinafter "Consultant."

WITNESSETH:

WHEREAS, the City has determined to undertake activities needed to plan and implement the Professional Consulting Services for the Instream Biological and Water Quality Assessment, hereinafter "Project", and does not have a sufficient staff of permanent employees to do so; and,

WHEREAS, the Consultant is a skilled, competent, and experienced professional firm having the necessary personnel, equipment, and other resources to perform the required services; and,

WHEREAS, the Consultant has been selected in accordance with applicable portions of state laws and MSDGC policies to provide these services,

NOW THEREFORE, for and in consideration of the promises, covenants and agreements herein contained, the parties mutually agree as follows:

ARTICLE 1 - THE AGREEMENT

- 1.1 The Agreement includes written contract terms of 43 Articles ("First Part of the Agreement"), EXHIBIT A [Scope of Work, including deliverables (the "Work")] and EXHIBIT B (Project Budget).
- 1.2 Where the terms and provisions of this First Part of the Agreement vary from the terms and provisions of the other documents included in the Agreement, the terms and provisions of this First Part of the Agreement shall prevail over the other documents included in the Agreement and, in like manner, EXHIBIT A shall prevail over EXHIBIT B.

ARTICLE 2 - SCOPE OF WORK

The Consultant shall, in accordance with current professional standards and in a satisfactory and proper manner as reasonably determined by the City Manager of the City of Cincinnati acting through the staff of MSDGC, perform the Work.

ARTICLE 3 - CONTRACT TERM

- 3.1 This Agreement is effective upon execution by the City (the "Effective Date") and terminates on September 30, 2018 (the "Termination Date"). This Agreement may be extended by the City for good cause shown for additional time upon execution of a duly-executed written amendment to this Agreement by the City and the Consultant.
- 3.2 Consultant will be authorized to begin the Work described herein by written Notice-to-Proceed from the City Manager or his/her designee. All of the assignments of the Consultant shall be completed in accordance with the schedule included in this Agreement. All of the Work will be completed prior to the termination date of this Agreement or the termination date of any extension of this Agreement as provided in Article 3.1 (for the purposes of the Agreement "Termination Date" shall mean either the date set forth in the Article 3.1 or in the case of an extension, the extended termination date). Requests to modify the Work are to be in writing and directed to the MSDGC Project Manager (as hereinafter defined), with a copy by the Consultant's Project Manager to the MSDGC Document Control section (as hereinafter defined).
- 3.3 Consultant agrees that time is of the essence in the performance of the Consultant's obligations under this Agreement. The Consultant agrees that no other work in its office will be permitted to interfere with work required under this Agreement in order to achieve timely performance, and that the required level of resources will be provided to meet the schedules set forth herein.
- 3.4 The Consultant shall employ at all times professional and support personnel with requisite expertise and in adequate numbers for the complete and timely performance of the Consultant's obligations hereunder. The City recognizes that the Consultant's performance must be governed by sound professional practices.
- 3.5 All Work will be completed prior to the Termination Date. If Consultant fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then the City shall be entitled to the recovery of direct damages resulting from such failure. The City shall also be entitled to reasonable attorney fees and any costs incurred by the City in pursuing the recovery of damages resulting from Consultant's failure to complete performance of its services within the time set forth in this Agreement.

ARTICLE 4 - CONSULTANT'S GENERAL RESPONSIBILITES

4.1 For all Work on the Project, the Consultant will be responsible for: alternatives analysis; providing special and optional services as requested; and providing the project

- management services and quality control necessary to accomplish these services in a well-coordinated, efficient and effective manner as is consistent with the generally accepted standard of professional skill and care.
- 4.2 The Consultant shall cooperate fully with the City, and all other contractors employed for the Project, to effect proper coordination and progress to complete the Project on schedule and the Work in proper sequence.
- 4.3 Consultant shall be solely responsible for coordination of all of the Work. Consultant shall cooperate fully with all subcontractors, testing agencies and all others whose services, materials or equipment are required for the completion of the Project by the Termination Date.

ARTICLE 5 - CONTRACT AMOUNT

The City will pay the Consultant up to a maximum amount of One-Hundred-Fifty-Seven Thousand Seven-Hundred-Fifty-One Dollars and Seventy-Eight Cents (\$157,751.78) ("Contract Amount") in accordance with this Agreement, including the terms of this First Part of the Agreement and EXHIBIT B, for the Consultant's successful completion of the Work. The Consultant agrees that it shall complete the Work for the total Contract Amount specified in this Article unless such amount is modified as provided in this Agreement. The Contract Amount includes all of Consultant's costs and fees, including profit.

ARTICLE 6 - CONSIDERATION AND PAYMENT

- 6.1 Payment to the Consultant for the Work will be made in accordance with the project budget set forth in EXHIBIT B.
 - Payment for Consultant's services shall be based upon a lump sum payment tied to the acceptable completion and acceptance by the City of a deliverable (or deliverables) as identified in a schedule of deliverables within EXHIBIT A. Payment shall be based on actual work completed for the Tasks listed in EXHIBIT A.
 - Payment will be in accordance with the agreed-upon Consultant's employees performing the services and not exceeding the approved budget as shown in EXHIBIT B.
- The City shall make payment not more frequently than monthly and upon submission of an approved requisition for payment (the "Invoice"). Invoices shall include a breakdown by Task listed in EXHIBIT B and include: i) a specification that the required services for the deliverables have been performed; ii) current completion date for the Work invoiced iii) amount of SBE participation; iv) identification of the Project with the applicable identifiers such as title, contract number, certification number, CIP number, and sewer number; and project number; v) amount due and amount previously invoiced; vi) total amount previously authorized; and vii) attachments presenting data such as time sheets satisfactory to the City to document entitlement to payment. The Consultant shall promptly submit satisfactory Invoices as determined by the City.

Properly submitted and approved Invoices shall be paid within thirty (30) days after receipt of the Invoices by the City. Inadequate Invoices will delay payment proportional to the additional review time required; however, undisputed invoice portions shall be processed for payment.

- 6.2.1 Any provision hereof to the contrary notwithstanding, the City shall not be obligated to make payment to the Consultant with respect to one or more of the following conditions for which the Consultant has been given at least fifteen (15) days written notice of the condition and failed to cure the condition:
 - 6.2.1.1 The Consultant is in default of any of its obligations under the Agreement; provided, however, that the City may retain only such amount as is reasonably necessary to cure the default.
 - 6.2.1.2 Part of the payment requested is attributable to services that were not performed in accordance with this Agreement; provided, however, that such payment shall be made as to the part thereof attributable to services that were performed in accordance with this Agreement.
 - 6.2.1.3 The Consultant has failed to make payments promptly to sub-consultants or other third parties used in connection with the services for which the City has made payments to the Consultant, unless the payment is being withheld by the Consultant as the result of a bona fide dispute.
- 6.2.2 The City shall have the right to request certified payrolls for either or both the Consultant's employees and the Consultant's sub-consultant's employees.
- 6.2.3 The Consultant acknowledges the importance of submitting complete requisitions for payment for all Work performed during the billing period for which it is requesting payment and will require its sub-consultants to do likewise. The City shall have no obligation to make payment for any of the Work performed on a time and materials basis by a sub-consultant that was performed more than sixty (60) days prior to the earliest date of Work performed by the Consultant for which the Consultant is requesting payment. (For example, if the Consultant submits a request for payment on June 1, 2014 that covers all of the Work performed by the Consultant between May 1 and May 31, 2014, the City is not obligated to pay Consultant for Work performed by a sub-consultant before March 1, 2014.)
- 6.3 The Consultant shall also be reimbursed without markup for other approved direct costs involved in performing the Work. The City shall not pay routine costs of doing business such as preparation of invoices, proposals, telephone charges, tools of the trade, home office administrative charges not directly related to the project, home office personnel, and charges for the mailing and reproduction of incidentals.
- 6.4 Expenses for travel expenses for lodging, meals, mileage, and incidental expenses shall be included in EXHIBIT B.

- 6.5 The City may pay for special education training for Consultant staff support that is requested by and approved in advance by the MSDGC Project Manager and that the MSDGC Project Manager has determined provides the Consultant staff support with essential information necessary to the delivery of the Consultant's professional services to the City.
- 6.6 Additional costs for which the City shall not reimburse the Consultant:
 - 6.6.1 Costs associated with the preparation of amendments to this Agreement or the preparation or filing of claims;
 - 6.6.2 Expenses of the Consultant associated with anticipated lost profits, lost revenue, lost income, or lost interest on earnings;
 - 6.6.3 Costs of special consultants or attorneys, whether or not in the direct employ of the Consultant, employed for services specifically related to the resolution of a claim, dispute, or other matter relating to the acceptability of the Work.
 - 6.6.4 Continuing education training expenses for individual consultants working on MSDGC projects.
- 6.7 The Consultant shall submit its invoices to MSD Accounts Payable, 1600 Gest Street, Cincinnati, Ohio 45204, or, to MSDAccountspayable@cincinnati-oh.gov.

ARTICLE 7 - STANDARD OF CARE

- 7.1 In providing services under this Agreement, the Consultant will perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently performing similar services and practicing under similar circumstances. The Consultant makes no other representations or warranties, whether expressed or implied, with respect to the services rendered hereunder. Upon notice to the Consultant, and by mutual agreement between the parties, the Consultant will without additional compensation, correct those services not meeting such a standard.
- 7.2 The Scope of Work includes the development of Project-specific objectives and criteria. Consistent with the applicable standard of care, the Consultant's deliverables for the Project shall be consistent with agreed-upon Project-specific objectives and criteria. If the Consultant's deliverables are not consistent with Project-specific objectives and criteria, the Consultant shall notify the City in writing of the differences between the deliverables and Project-specific objectives and criteria in sufficient time and with sufficient detail for the City to respond to the Consultant so that the differences can be resolved to the City's satisfaction.
- 7.3 Consultant and the City shall comply with applicable Laws and Regulations that the City has provided to Consultant in writing. This Agreement is based on these requirements that are in effect as of the date the parties entered into this Agreement.

- Changes to these requirements after the date the parties entered into this Agreement may be the basis for modifications to Consultant's scope of services, times of performance, and compensation.
- 7.4 The deliverables for the Project as developed through the Scope of Work described in EXHIBIT A shall be subject to the approval of the City. Payments to the Consultant for Work performed do not constitute such approval by the City.

ARTICLE 8 - CONSULTANT'S REPRESENTATIVE AND KEY PERSONNEL

- 8.1 Consultant shall designate and authorize Chris Yoder, who is an employee of Consultant, to act as its agent for all purposes under this Agreement, who shall be available at all times to the City for the purpose of notification and consultation, and who shall be designated as the "Consultant's Project Manager" having overall responsibility for all phases of Consultant's participation in the Project.
- 8.2 The parties acknowledge the importance of the City's confidence in the personal services of key members of the Consultant's team and the continuity of key members' participation in the services to be provided under this Agreement. This Agreement has been entered into on the representation that the individuals, firm affiliations, assignments, responsibilities, and office locations will be maintained for this Project.
- 8.3 No substitution or replacement of individuals or change in status (e.g., firm affiliation, assignment, responsibilities or office location) of key personnel shall be made by the Consultant without the prior approval of the MSDGC Project Manager, except when necessitated by causes beyond the Consultant's reasonable control. The City shall have the right in any event to approve any substitution or replacement or change in status for Consultant's personnel assigned to this Project. At the request of the City, the Consultant shall consult with it to resolve any situation in which a member of the Consultant's team (including, without limitation, any sub-consultant or any principal or employee thereof) is failing to perform to an adequate professional and technical standard. No act or omission of the City made or permitted under this Section shall relieve the Consultant of its sole responsibility for the Work.

ARTICLE 9 - ADDITIONAL WORK

- 9.1 The Consultant shall not be compensated for any work, except that which is specifically included in EXHIBIT A. Any work in addition to that included in EXHIBIT A shall be requested in writing, authorized by the City, and included in an amendment to this Agreement. Any additional work first requested in writing, and then approved by the City, will be paid at the then-current rates.
- 9.2 The City may request changes in the Work within the general scope of the Work consisting of additions, deletions, or other revisions. If a change causes a change in the scope of work the parties shall agree upon adjustments to the Contract Amount, the Schedule, or Contract Term, if any, and such adjustments shall be made a written

- amendment to the Agreement signed by the parties prior to the performance of such change in the Work.
- 9.3 If the Consultant requests a change in the Work, Consultant shall provide to the City within fourteen (14) days of the event giving rise to the request a written proposal stating: (1) the reasons for the proposed change; (2) the impact of the proposed changes on compensation and schedule, and (3) the detailed nature of any costs to be incurred, including reasonable adjustment to other applicable provisions in this Agreement. If the City accepts any such requested Consultant change, an amendment to the Agreement shall be properly executed by the parities.
- 9.4 If the Consultant wishes to make a claim for an increase in any sums due the Consultant, it shall give the City written notice within fourteen (14) days of the event giving rise to the claim. The notice shall be given by Consultant before proceeding to execute any additional services relating to the Work which is the basis for such claim and include: (1) the amount of additional compensation claimed; (2) the justification for the belief that it is outside of, or a material change to the Agreement; and, (3) all supportive documentation.
- 9.5 The Consultant will not be compensated for performing any Work unless the written notice complying with the above Article 9 has been submitted in the time specified and a written amendment has been properly executed by the parties.

ARTICLE 10 - PERFORMANCE EVALUATION RATING

A performance rating has not been established for this project

ARTICLE 11 - SCHEDULE MANAGEMENT

- 11.1 Without limiting the Consultant's general obligations under this Agreement, the Consultant shall adhere to the time schedule set forth in EXHIBIT D.
- 11.2 Project Schedule The Consultant shall be required to prepare a Project Cost-loaded Critical Path Method ("CPM") Schedule for completing all Work including submittal of deliverables by the Termination Date. The schedule format will be reviewed and approved by the City. The Consultant shall include milestone dates, as identified by the City, in the Schedule.
- 11.3 The Consultant is responsible for coordinating its own schedules, including those of its sub-consultants, as well as activities of others directed by the Consultant.

ARTICLE 12 - MSDGC PROJECT MANAGER

12.1 The City will designate a party to act as its Project Manager on its behalf with respect to this Agreement (the "MSDGC Project Manager"). The MSDGC Project Manager may or may not be an employee of the City, in its sole discretion. The MSDGC Project Manager

- will examine the Consultant's submissions for quality and completeness and will render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the Work to be performed by the Consultant.
- 12.2 In the course of the Agreement, upon reasonable notice to the Consultant, the City may make such other or additional arrangements for the delegation of its rights and responsibilities under this Agreement as it deems to be in its best interests.

ARTICLE 13 - APPROVALS

The City will not unreasonably withhold any approval to be given by it with respect to submissions required to be made by the Consultant in the performance of this Agreement.

ARTICLE 14 - PROJECT BUDGET

- 14.1 The Consultant acknowledges the importance of completion of the Work in accordance with the Project Budget. The Consultant shall monitor the Work on a monthly basis, and report on its progress to guard against increases in costs which may be mitigated by the early attention of the parties with responsibility in the matter. Reports shall be made monthly.
- 14.2 The format of the budget report for the Work (the "Work Budget Report") shall be approved prior to submittal of the first report. Consultant shall submit the proposed format of the Work Budget Report for approval within two weeks of execution of this Agreement.

ARTICLE 15 - DOCUMENT CONTROL

- 15.1 It is the intent of the City to use a document control system for facilitating official project communication documentation between the Consultant and it. The Consultant shall coordinate with the MSDGC Project Manager to ensure that delivery of all communications, deliverables, reports, certificates of insurance, and other items as may be requested by the City, are submitted through its Document Control section.
- 15.2 All deliverables described in EXHIBIT A shall be provided to the City both electronically in an editable format and in hardcopy.

ARTICLE 16 - PROJECT CLOSEOUT

- 16.1 Prior to payment of the final invoice, Consultant agrees that it shall deliver to the City the following:
 - 16.1.1 All electronic data files, plans, sketches, drawings, conversation reports, photographs, pamphlets, posters, documents, reports, memoranda, and reproducibles related to the Project and other information related to the Project as required by the City. Consultant may retain copies of any or all of the aforementioned materials for its files.

- 16.1.2 All non-expendable personal property purchased and approved by the City as Other Direct Costs as defined in EXHIBIT B.
- 16.1.3 A formal written release of all claims seeking further payment and financial requirements arising by virtue of this Agreement, other than such claims, if any, as may be specifically exempted by Consultant from the operation of the release in stated amount to be set forth therein.

ARTICLE 17 - SUB-CONSULTANTS

- 17.1 The Consultant shall advise the City on a periodic basis of the identities of key personnel engaged by its sub-consultant for this Agreement, of their availability to perform the work for which they are responsible to the Consultant, and of the sufficiency of their staffing for the Project.
- 17.2 None of the Work shall be subcontracted to a sub-consultant without the prior written approval of the City, which shall not be unreasonably withheld. Identification of a specific sub-consultant(s) shall constitute the required prior written approval of the City. Any services subcontracted shall be by written contract available to the City and such contract shall explicitly state that it is subject to each provision of this Agreement. The Consultant shall provide the same level of documentation for subcontract billing as is required for the Consultant's own workforce. The Consultant may not mark-up work performed by a sub-consultant unless such mark-up is specifically identified in this Agreement.
- 17.3 The City maintains a list of Vendors Debarred from Contracting or Subcontracting with the City, which may be accessed at: http://www.cincinnati-oh.gov/purchasing or may be furnished in other form upon request. The City will not contract with any firm or person on the list. It is the Contractor's (Consultant's) responsibility to verify that each subcontractor (sub-consultant) it proposes to use is an eligible firm or person. The City will not approve a subcontractor whose name appears on the list. The City shall neither accept nor be liable for any increase in costs, or other expenses, delay, loss, or subsequent ineligibility to contract with the City, incurred by a contractor as a result of the City rejecting any proposed person, firm, partner, principal, affiliate, subcontractor or supplier that is debarred or suspended after the submission of a bid, proposal, or other communication leading to a contract, but before the approval or award of the contract.
- 17.4 Nothing in this Article shall relieve the Consultant of its sole and prime responsibility for the performance of this Agreement, including all performance by sub-consultants.

ARTICLE 18 - ASSIGNMENT

The Consultant shall not assign, transfer, convey, sublet or otherwise dispose of any interest, rights, or obligations under this Agreement, without the prior written consent of the City.

ARTICLE 19 -EQUAL OPPORTUNITY AND SMALL BUSINESS ENTERPRISE

- 19.1 The Consultant's employment and contracting practices related to this Agreement shall conform to the MSDGC Small Business Enterprise Program.
- 19.2 The Consultant agrees that by the 15th of each month it shall submit information on subconsultant utilization and monthly subconsultant payments into the City's LCP Tracker System for this Project.
- 19.3 In connection with the performance of services under this Agreement, the Consultant hereby agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The aforesaid provisions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Consultant agrees to post hereafter in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. To the extent applicable, the Consultant shall comply with Title VI and VII of the Civil Rights Act of 1964, as amended; Title 49, Code of Federal Regulations; Part 21 through Appendix H and Title 23, CFR 710.405(b). To the extent applicable, the Consultant is required to comply with the provisions of Executive Order 11246, entitled "Equal Employment Opportunity", as amended by Executive Order 11375, and as supplemented in Department of Labor Regulations (41 CFR Part 60). To the extent applicable, the Consultant shall comply with the Immigration Reform and Control Act (IRCA) of 1986 and agrees to permit the MSDGC and its agents access to the Consultant's personnel records to verify its compliance with IRCA requirements.
- 19.4 Details concerning these programs may be obtained from Department of Sewers Procurement, 805 Central Avenue, Suite 234, Cincinnati, Ohio 45202; (513) 352-3278 and the MSDGC Office of Workforce and Business Development Small Business Enterprise Program, 1600 Gest Street, Cincinnati, Ohio 45204; (513) 557-5967.

ARTICLE 20 - TERMINATION OF THE AGREEMENT, EVENTS OF DEFAULT, AND THE CITY'S RIGHT TO PERFORM CONSULTANT'S OBLIGATIONS

20.1 TERMINATION BY CONSULTANT. If the Consultant, in whole or substantial part, is stopped during the performance of the Work for a period of one hundred twenty (120) days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no negligent act, negligent omission, intentional misconduct or other fault of Consultant, or if the Consultant is not paid for a period of thirty (30) days due to the City's failure to make proper payment to the Consultant, the Consultant may, upon thirty (30) days' written notice to the City, terminate this Agreement and recover from the City payment through the month during which such termination takes place. Costs associated with the start-up and shut-down of the Work shall be at the Consultant's expense. Upon termination by Consultant, the Consultant shall provide all documents for the Project and other Project-related data theretofore prepared

- by the Consultant for the Project by whatever method the City deems expedient, and the City may use such documents and other Project-related data prepared by Consultant to complete the Project.
- 20.2 EVENTS OF DEFAULT. Any of the following events shall constitute "Events of Default" by Consultant under this Agreement:
 - 20.2.1 The City should at any time determine, in its reasonable judgment, and notify Consultant in writing that the City has determined that the performance of the Work is not proceeding in substantial compliance with the requirements of this Agreement and Consultant fails, within ten (10) days after the City notifies Consultant of the same, to furnish to the City evidence reasonably satisfactory to the City that either (i) the performance of the Work is or will be brought into substantial compliance with the requirements of this Agreement, or (ii) provides reasonable justification for the noncompliance with the requirements of this Agreement and satisfies the City that such noncompliance will not adversely affect any milestone dates for the Work.
 - 20.2.2 Consultant materially defaults in the performance of any other obligations of Consultant under this Agreement and fails to commence to cure satisfactorily such default within seven (7) days after the City gives Consultant written notice of the default; provided, however, that the City shall not be required to give additional written notice of, and Consultant shall not be entitled to a cure period with respect to, persistent defaults in the performance of the obligations of Consultant under this Agreement.
 - 20.2.3. Consultant, after receipt of notice of same, persistently disregards any federal, state or local statute or ordinance, rule, regulation, permit or order of any public authority having jurisdiction over the Work or the Project.
 - 20.2.4. The entry of an order for relief pursuant to any Chapter of Title 11 of the U.S. Code, as the same may be amended from time to time, with Consultant as debtor, or the filing by or against Consultant of any other insolvency proceeding or any other proceeding for compromise, adjustment or other relief under the laws of the United States or of any state relating to the relief of debtors.
- 20.3 Upon the occurrence and during the continuance of an Event of Default, the City may, but shall not be obligated to, take such actions as the City deems reasonable in order to cure the act or omission of Consultant that is the basis for the Event of Default, without thereby waiving the Event of Default, and the Contract Amount shall be reduced by the cost to the City of taking any such actions and Consultant shall only be paid for services rendered prior to the termination.
- 20.4 Upon the occurrence and during the continuance of an Event of Default, the City may, without prejudice to or limitation upon any other right or remedy which might be available to it at law or in equity, terminate the services of Consultant and, the Consultant shall provide to the City all documents for the Project and other Project-

related data prepared by the Consultant for the Project by whatever method the City deems expedient, and the City may use such documents and other Project-related data prepared by Consultant to complete the Project. In such case, Consultant shall not be entitled to receive any further payment with respect to the Consultant's compensation until the Work is finished, nor shall it be relieved from its obligations under this Agreement. If the Agreement is terminated by the City as provided herein, the Consultant will be paid for the satisfactory services authorized and performed to the termination date, in a timely manner, and in accordance with applicable payment schedules set forth herein.

- 20.5 Termination for Convenience The City may terminate this Agreement at any time by giving at least fourteen (14) days' notice, in writing, from the City to the Consultant. If the Agreement is terminated by the City as provided herein, the Consultant will be paid for the satisfactory services authorized and performed to the termination date, in a timely manner, and in accordance with applicable payment schedules set forth herein. The City shall take into account identified tasks and hours spent in determining the value of compensated services.
- 20.6 The City reserves the right to reduce the services required herein of the Consultant and reduce any project budget in a manner which reflects such reduction, by giving notice of such, in writing, stating the date such reduction will become effective.
- 20.7 Prior to final payment Consultant shall meet the requirements listed in Article 16 PROJECT CLOSEOUT.

ARTICLE 21 - DISPUTE RESOLUTION

- 21.1 The City and Consultant agree to negotiate all disputes between them in good faith for a period of thirty (30) days from the date of notice of a dispute by one of the parties, prior to invoking the procedures described in the following paragraphs.
- 21.2 If the parties fail to resolve a dispute through negotiation under Paragraph 21.1, then the dispute shall be subject to mediation, followed by litigation, as described in the following paragraphs.
- Mediation. Any dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to the institution of legal or equitable proceedings by either party, unless the parties mutually agree otherwise. Mediation shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect or rules of such other forum as the parties have agreed. Request for mediation shall be filed in writing with the other party to this Agreement and with the American Arbitration Association, if this is the forum selected by the parties. The request may be made concurrently with the filing of a legal action but, in such event, mediation shall proceed in advance of any legal or equitable proceedings, which shall be stayed pending mediation for a period of 60

- days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.
- 21.4. <u>Litigation</u>. Disputes arising under this Agreement and related to the Project that are not resolved successfully through informal discussions between the parties or through mediation will be the subject of litigation in the Court of Common Pleas for Hamilton County, Ohio.

ARTICLE 22 - COMPLIANCE WITH LAWS AND POLICIES

- 22.1 In the performance of the Work, the Consultant shall, as is consistent with the generally accepted standards of professional skill and care, comply with applicable statutes, ordinances, regulations, and rules of the Federal Government, the State of Ohio, Hamilton County, and the City of Cincinnati. Whenever notices, approvals, authorizations, waivers, instructions, or determinations by the City are required under this Agreement, they shall be effective only when given either (i) in writing and signed by the City, or (ii) by regulations and policies issued from time to time by the City.
- 22.2 In particular, as is consistent with the generally accepted standards of professional skill and care, the Consultant agrees to comply with applicable regulations pertaining to approvals for federal and state grants, and with applicable environmental regulations, including timely applications for permits. If a change in regulations would substantially increase or decrease the scope of the Work, the Consultant shall consent to such modifications of this Agreement as may be required by the City and the parties shall agree upon any necessary equitable adjustments in compensation.
- 22.3 This Agreement is subject to and the Consultant shall comply with the provisions of Chapter 319 of the Cincinnati Municipal Code that provide for a Prompt Payment System.

ARTICLE 23 -HOLD HARMLESS

23.1 The Consultant shall indemnify, defend, save and hold the City of Cincinnati and the Board of County Commissioners of Hamilton County, Ohio and their officers, employees and agents free and harmless against any and all claims, demands, actions, judgments, losses, damages, settlements, costs, charges, professional fees, or other expenses or liabilities to the proportionate extent arising directly or indirectly out of or relating to any and all negligent acts, errors, or omissions by the Consultant (including its employees and agents employees, agents and sub-consultants) in performance of the Work or any ambiguities in the plans and specifications prepared by the Consultant, provided that such ambiguities are originated by or the responsibility of the Consultant and to the extent that such ambiguity is the result of a negligent act, error, or omission of the Consultant in the performance of this Agreement. The Consultant shall be given the opportunity to defend on behalf of the City of Cincinnati and Hamilton County, any action or claim brought against it which, if successfully prosecuted, would give rise to a claim hereunder against the Consultant.

- 23.2 This indemnification shall not result in the unjust enrichment of the City of Cincinnati or the Board of Commissioners of Hamilton County. In the case of any material ambiguities, the City shall afford the Consultant a reasonable opportunity to mitigate damage and clarify any such ambiguities within a reasonable time after discovery by or notice to the City. The City shall promptly notify the Consultant of any claim, demand, action, cause of action or other liability for which it may seek indemnification from the Consultant.
- 23.3 <u>Consequential Damages</u>. Notwithstanding any provision in this Agreement to the contrary, and to the fullest extent permitted by law, Consultant shall not be liable to Owner and the City expressly waives all claims for loss of profits, revenue, use, opportunity, and goodwill; cost of substitute facilities; cost of capital; increased operating costs; and for any special, indirect, incidental, consequential, punitive, or exemplary damages resulting in any way from the performance or non-performance of the Services whether arising under breach of contract or warranty, tort (including negligence), indemnity, strict liability or other basis of legal liability. However, the City does not waive any claims for stipulated penalties or other damages arising out of or related or required by the Consent Decree.
- 23.4 <u>Subsurface Investigations</u>. In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total cost and/or execution. These conditions and cost/execution effects are not the responsibility of Consultant.

ARTICLE 24 - FORCE MAJEURE

Neither party to the Agreement shall be deemed to be in default in the performance of its obligations hereunder if that party is prevented or delayed from performing by forces beyond its reasonable control including, without limitation, acts of God or of a public enemy; interference or delay by municipal, state, federal, or other governmental agency; any catastrophe resulting from flood, fire, extreme weather conditions, explosion, or other cause beyond the reasonable control of the non-performing party and labor disputes or other work stoppages.

ARTICLE 25 -REPORTS, INFORMATION AND AUDITS

25.1 The Consultant, at such time and in such form as the City may require, shall furnish the City such reports as may be requested pertaining to the Work, the costs and obligations incurred or to be incurred in connection therewith, and any other matters covered by this Agreement. The Consultant shall retain all financial and administrative records for a minimum of three years following completion of this Agreement, and shall permit the City or any of its representatives or auditors access to such records upon advance notice during normal business hours.

- Whenever the Consultant has obtained the Cincinnati Area Geographical Information System (CAGIS) data at no cost for the purpose of performing the Work, the Consultant agrees not to use any such CAGIS data for non-MSDGC projects. Additionally the Consultant shall require its sub-consultants to agree not to use any such CAGIS data for any non-MSDGC project. If the Consultant has purchased CAGIS data for multi-client use, no portion of those costs will be reimbursed by the City.
- 25.3 Except as authorized by the City, the Consultant and other sub-consultants shall not provide MSDGC infrastructure records or information to persons outside of the Consultant's organization and sub-consultants except as may be required by subpoena or legal proceeding.

ARTICLE 26 - CONFLICT OF INTEREST

No officer, employee, or agent of the City who exercises any functions or responsibilities in connection with the planning and carrying out of the Work, nor any immediate family member, close business associate, or organization which is about to employ any such person, shall knowingly have any personal financial interest, direct or indirect, in the Consultant or in this Agreement. The Consultant shall take appropriate steps to assure compliance. The Consultant agrees that it will not contract with any sub-consultant in whom the Consultant has any personal financial interest, direct or indirect. The Consultant further covenants that no person who has any financial or conflicting interest in the Work shall be knowingly employed. The Consultant has the responsibility to request disclosure of potential conflicts of interest. The Consultant must report potential conflict of interest to the City for direction and disposition.

ARTICLE 27 - CONSULTANT INSURANCE

- 27.1 It shall be the responsibility of the Consultant to protect all life and property, and to protect the City, the Consultant, and its employees and sub-consultants from liability claims that may result from performance of the Work.
- 27.2 The Consultant shall secure and maintain general liability insurance protecting Consultant against claims for bodily injury, death or property damage which may arise as a result of the Consultant's actions during the performance of the Work in an amount of at least One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) per project in the aggregate. The City of Cincinnati and the Board of Commissioners of Hamilton County, Ohio shall be named as additional insureds under this policy.
- 27.3 The Consultant shall secure and maintain professional liability insurance with a combined single limit of One Million Dollars (\$1,000,000.00) per claim with a maximum deductible not to exceed Twenty-Five Thousand Dollars (\$25,000.00). Such insurance shall extend to the Consultant and to its legal representatives in the event of death, dissolution or bankruptcy, and shall cover the negligent acts, errors and omissions of the Consultant, sub-consultants and employees. Such insurance shall extend to any negligent act, error or omission in the performance of the Work committed by the Consultant, its sub-consultants, or employees, or any other person or entity for whom the Consultant is legally liable. Such coverage shall be in effect from the date services are first provided

under this Agreement and shall be maintained in force until the later of (i) the completion of the Work or (ii) official acceptance of the Project by the City; and, provided that such insurance is generally available, shall be maintained for an additional period of three (3) years after the later of (i) the completion of the Work or (ii) official acceptance of the Project by the City.

- 27.4 The Consultant shall secure and maintain Workers Compensation insurance as required by the laws of the State of Ohio.
- 27.5 The Consultant shall also carry insurance coverage for valuable papers for the restoration of plans, field notes, drawings, computations, specifications or other documents in the event of loss or destruction of such materials in the custody of the Consultant, in an amount sufficient to cover the cost of restoration.
- 27.6 The Consultant shall secure and maintain automobile liability insurance with a limit of One Million Dollars (\$1,000,000.00) per occurrence. The City of Cincinnati and the Board of Commissioners of Hamilton County, Ohio shall be named as additional insureds under this policy.
- 27.7 Prior to executing this Agreement the Consultant shall provide the City with proof of all the insurances required herein. The Consultant shall provide the City thirty days written notice prior to any cancellation (except for non-payment) or non-renewal of any insurance required herein. Consultant shall deliver one copy each of the certificates of insurance and endorsements (and other evidence of insurance requested by the City or any other additional insured) which Consultant and all sub-consultants are required to purchase and maintain.
- 27.8 All insurance must be provided through companies authorized to do business in the State of Ohio and rated at least A: VII by the A. M. Best Company.

ARTICLE 28 - INDEPENDENT CONTRACTOR

The Consultant shall perform all of the Work as an independent contractor and not as an officer, agent, servant, or employee of the City. The Consultant shall have exclusive control of and the exclusive right to control the details of the Work and all persons performing the same and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors, and sub-consultants, if any. Nothing herein shall be construed as creating a partnership or joint venture between the City and the Consultant. No person performing any of the Work shall be considered an officer, agent, servant, or employee of the City, nor shall any such person be entitled to any benefits available or granted to employees of the City.

ARTICLE 29 - CONFIDENTIAL OPINIONS OF PROBABLE COST

Notwithstanding publication or legislative proceedings, all opinions of probable cost prepared by the Consultant are to be considered confidential. It is agreed between the parties that the Consultant shall make reasonable attempts to control the confidentiality of any opinion of probable cost that the Consultant became privy to as a result of this Agreement. Any requests

by others for opinions of probable cost shall be referred to the City. Consultant shall not be restricted from releasing information in response to a subpoena, court order, or other legal process but shall notify the City of the demand for information before responding to such demand.

ARTICLE 30 - SEVERABILITY

In the event that any provision of this Agreement is declared or determined to be unlawful, invalid, or unconstitutional, such declaration shall not affect, in any manner, the legality of the remaining provisions and each provision of the Agreement will be and is deemed to be separate and severable from every other provision.

ARTICLE 31 - DRUG-FREE WORKPLACE

The Consultant certifies and affirms that the Consultant will comply with all applicable state and federal laws regarding a drug-free workplace. The Consultant will make a good faith effort to ensure that all employees performing duties or responsibilities under this Agreement while working on state, county, city or private property, will not purchase, transfer, use or possess illegal drugs or alcohol, or abuse prescription drugs in any way.

ARTICLE 32 - OWNERSHIP OF PROPERTY

- 32.1 The Consultant agrees that at the expiration or in the event of any termination of this Agreement that any memoranda, maps, drawings, working papers, reports, and other similar documents produced as a deliverable in the performance of the Work for the sole benefit of the City shall become the property of the City upon payment therefore, and the Consultant shall promptly deliver such items to the City without any additional compensation to the Consultant. The Consultant may retain copies for its record.
- 32.2 Unless specified otherwise, the City will rely upon the printed, plotted, electronic or hard copies of material prepared by the Consultant. Any discrepancy between the hard copy and the electronic version identified by the City and pointed out to the Consultant within reasonable time of delivery by the Consultant must be reconciled by diligent efforts of the Consultant at no additional cost to the City; provided, however, because data stored on electronic media can deteriorate undetected or be modified without Consultant's knowledge, the Consultant makes no warranty as to the compatibility of the data files beyond the specified release or version of the software, or with the City's hardware and / or software configurations unless specifically set forth in a Task Order, nor shall Consultant be responsible for maintaining copies of the submitted electronic files after acceptance by the City or be held liable for completeness or accuracy of the electronic data after the acceptance thereof.
- 32.3 Reports and other documents to be submitted to the City will conform to the instructions of the City with respect to the format, numbering, labeling and indexing of documents. Engineering drawings shall in every instance be stamped and signed by an Ohio licensed professional engineer.

ARTICLE 33 - INTELLECTUAL PROPERTY

Except as otherwise provided herein, all documents, drawings, electronic files, and specifications prepared by the Consultant as a deliverable of the Work shall become the property of the City; however, the Consultant may have the right to their use but not for resale. It is agreed that any original documents, drawings, electronic files, and specification designed for the City and any variations to any original documents and drawings designed for the City MSDGC are the property of the City. The Consultant shall retain its rights in its standard drawing details, designs, specifications, databases, computer software and other proprietary property. Any modification or use by the City of the Consultant's work product other than for which it was prepared shall be at the City's discretion and without expression of suitability or applicability by the Consultant with respect to the modification or other use at user's sole risk without liability or legal exposure to the Consultant. No use of MSDGC infrastructure information is permitted unless authorized by the City in writing.

ARTICLE 34 - RIGHT TO REVIEW

The City shall have the right at any time and at its sole discretion to submit for review any or all parts of the Work performed by the Consultant to consulting engineers or other specialists engaged by the City for that purpose. The Consultant shall cooperate fully in such review at the City's request.

ARTICLE 35 - RIGHTS AND REMEDIES

The City's review, approval, acceptance or payment for any part of the Work shall not operate as a waiver of any rights under this Agreement and the Consultant shall be and remain liable to the City for all damages incurred by the City as the result of the Consultant's failure to perform in conformance with the terms and conditions of this Agreement. The rights and remedies of the City provided for under this Agreement are in addition to any other rights or remedies provided by law. The City may assert a right to recover damages by any appropriate means, including but not limited to set-off, suit, withholding, recoupment, or counter-claim

ARTICLE 36 - MODIFICATIONS

If the State of Ohio or its agencies require modifications or changes in this Agreement as a condition precedent to the granting of funds for any of the Work, the Consultant agrees to consent to such modifications or changes as may be reasonably required to obtain such funds. An equitable adjustment shall be made to the Consultant's compensation for any such modification or change.

ARTICLE 37 - THIRD PARTY RIGHTS

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Consultant.

ARTICLE 38 - LAW TO GOVERN

This Agreement is entered into in the State of Ohio. The City and the Consultant agree that the law of the State of Ohio shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement and shall govern the interpretation of this Agreement.

ARTICLE 39 - FORUM SELECTION

The Consultant and its successors and assigns acknowledge and agree that all state courts of record sitting in Hamilton County, Ohio, shall be the exclusive forum for the filing, initiation and prosecution of any suit or proceeding arising from or out of, or relating to this Agreement, or any amendment or attachment thereto, including any duty owed by the Consultant to the City in connection therewith.

ARTICLE 40 - ENTIRETY

This Agreement (which includes the Exhibits attached hereto) contains the entire contract between the parties as to the matters contained herein. Any oral representation or modification concerning this Agreement shall be of no force and effect.

ARTICLE 41 - AUTHORIZATION OF SIGNATORY ON BEHALF OF CONSULTANT

The Consultant shall provide the City with adequate proof that the party signing this Agreement has the authority to bind the Consultant. For example, if the Consultant is a corporation, Consultant shall provide the City with a current resolution of its board of directors authorizing the signatory to sign on behalf of the Consultant, and shall include the signatory's title. If the Consultant is a limited liability company, Consultant shall provide the City with a copy of the operating agreement and, if appropriate, any assignments of authority permitted by the operating agreement.

ARTICLE 42 - NOTICES

This Agreement requires that all notices, including notices of changes to the authorized signatory, Consultant name, primary contact and other contact information provided below, shall be personally served or sent by U.S. mail, postage prepaid, addressed to the parties as follows:

i. To the City of Cincinnati:

Full Name:

Patrick A. Duhaney

Chief Procurement Officer

City of Cincinnati

Mailing Address:

805 Central Avenue - Suite 234

Cincinnati, Ohio 45202

ii. To the Consultant:

Full Legal Name of Consultant: Midwest Biodiversity Institute, Inc. Primary Contact Name: Chris O. Yoder, Research Director Federal Tax I.D. No.: 31-1559845 Telephone No.: 614-457-6000 Fax No.: Mailing Address: 4673 Northwest Parkway Hilliard, OH 43026 Street Address City State Zip Remittance Address: (same) Street Address City State Primary Contact Email: CYoder@mwbinst.com Website: www.midwestbiodiversity.org

ARTICLE 43 - WAIVER

This Agreement shall be construed in a manner that a waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other breach of such provision or of any other provisions, nor shall any failure to enforce any provision hereof operate as a waiver of such provision or of any other provision.

(signatures on following page - remainder of this page left intentionally blank)

This Agreement is executed by the parties on the dates indicated below, effective as of the later of such dates (the "Effective Date").

City of Cincinnati	Midwest Biodiversity
	Institute, Inc.
an Ohio municipal corporation	an Ohio corporation
Harry Black, City Manager, City of Cincinnati as the sole management agency for the operation and maintenance of the sewer system on behalf of	By: Signature
the Metropolitan Sewer District of Greater Cincinnati	Printed / Typed Name Executive Director
Approved as to Form:	Printed //Typed/Title
Assistant City Solicitor	Date [As authorized by corporate resolution dated]
City Purchasing Approval: Patrick A. Duhaney, Chief Procurement Officer	June 7, 20/4
MSDGC Recommended:	MSDGC Accounting Approval:
Gérald R. Checco Director of Sewers	Steve Niemeyer, Senior Accountant 6/6//6
Certification of Funds: JUN 1 4 2016'	
Coding: 70/×410×/000× 728/ Amount: 757,75/. 28	

Instream Biological and Water Quality Assessment

The scope of service for this project will fully support MSDGC's compliance with its Ohio EPA issued CSO NPDES permit requires instream monitoring of biological and water quality of the Mill Creek, Little Miami, Great Miami, Ohio River/Muddy Creek and selected tributaries. This scope of work addresses the following services:

- 1. Assist MSDGC's compliance with the instream monitoring provision in the CSO NPDES permit (see pertinent excerpt below);
- 2. Produce Level 3 data under the Ohio Credible Data Law and Regulations which allows the data to be used for WQS use attainability analysis and TMDL purposes;
- 3. Provide a detailed and comprehensive baseline of biological and water quality conditions to measure WQS attainment, support effectiveness monitoring, and future planning through implementation of the IPS Dashboard Tool; and,
- 4. Support MSDGC data and information needs in meeting the terms and conditions of the CSO Consent Decree;

The MSDGC CSO NPDES Permit Monitoring Terms & Conditions Issued June 30, 2014 states the following in Section G. Instream Monitoring

As required by this NPDES permit, since 1994, the permittee has been conducting instream studies to evaluate the chemical specific and biological impacts associated with combined sewer overflows in its Mill Creek, Little Miami and Muddy Creek service areas. The permittee developed a plan of study for this monitoring in consultation with Ohio EPA. A series of letters between the permittee and Ohio EPA from February through June 1994 documented the Agency's acceptance of the plan of study.

Under that plan of study, the permittee has conducted monitoring in each service area on a three-year rotating schedule. During this permit cycle, the permittee will be adding the Great Miami River, and the monitoring will be on a four-year rotating schedule.

The Watershed Monitoring and Bioassessment Plan for the MSD Greater Cincinnati Service Area, Hamilton County, Ohio; Technical Report MBI/5-11-3 (2011, Midwest Biodiversity Institute) provides the overall framework for the instream monitoring conducted during the term of this NPDES permit. It will allow the permittee to conduct studies to support its ongoing Capital Improvement Program and Wet-Weather Improvement Program.

During the term of this permit, the permittee shall conduct instream chemical specific and biological monitoring as follows:

2014	Ohio River Tributaries/Muddy Creek	
2015	Completion of Integrated Priority System (IPS)	
2016	Mill Creek	
2017	Little Miami River	
2018	Great Miami River/Ohio River Tributaries	
2019	Ohio River Tributaries/Muddy Creek	

The permittee shall submit a report on the 2014, 2016, 2017, 2018 and 2019 stream studies to the Ohio EPA Southwest District Office no later than June 30 of the following year.

Task 1 – Study Planning: April through June each year

This task involves the development of a detailed plan of study that will be submitted to Ohio EPA for review and approval as a Level 3 Project Study Plan (PSP). The PSP will include all necessary details about sampling methods, locations, and key personnel. This task also includes a pre-field season meeting with MSDGC that includes MSDGC LAB for coordination of the receipt of water and

sediment samples, access to MSDGC property, and other logistical issues such as organization of field crews for the sampling season.

<u>Deliverables:</u> Firm shall prepare and submit a Level 3 Biological, Habitat, and Water Quality PSP for each annual rotation and provide MSDGC with an electronic version for review and approval. This will include:

- a) Coordination with the MSDGC Lab to obtain the required QAPP, SOPs, and laboratory accreditation to develop the chemical water quality parts of the PSP MSDGC Lab will be responsible for providing an approvable QAPP, SOPs, and the accreditation certificate required by the Ohio EPA Credible Data Program; and,
- b) The firm will submit each PSP for review and approval by MSDGC for submission to Ohio EPA for review and approval and respond to any questions MSDGC Lab will be responsible for responding to questions about the laboratory QAPP and SOPs.
- c) Organize and coordinate project study team prior to initiating the sampling season.

Task 2 – Mobilization: May through June & Demobilization: October through November each season

This task involves the mobilization of the chemical, fish/habitat, and macroinvertebrate crews including equipment preparation, field logistics, and pre-season safety training. It also includes the demobilization of the crews after the field work is completed in mid to late October.

<u>Deliverables</u>: The firm will provide and maintain all equipment and supplies needed to execute each Level 3 PSP.

Task 3 - Chemical Sampling: June through October each season

This task includes the collection of water samples (dry weather grabs), sediment samples (once at each location in mid to late October), and the deployment of approximately 10 Datasonde continuous recorders during mid-July to early September under summer normal flows. This is the most stressful period for aquatic life and when the full range of diel variations for dissolved oxygen (D.O.) and pH and maximum water temperatures are experienced. Measuring the diel variation in D.O. is a part of the emerging Ohio EPA combined nutrient criteria. Benthic chlorophyll a was added to the sestonic chlorophyll a sampling in 2013 in anticipation of this new water quality criterion. Sediment samples are collected at the end of the mid-June to mid-October seasonal index period and submitted to the MSDGC Lab for analysis. All water samples are delivered to the MSDGC Lab for analysis and on a schedule that permits the timely receipt, logging, and analysis of each sample in accordance with holding times and lab capacity on a daily and weekly basis. The chemical crew will consist of a Level 3 QDC and a field technician.

<u>Deliverables</u>: The firm will collect water and sediment samples at approximately 30 sites and deliver to MSDGC Lab for laboratory analysis. The specific sites and sampling frequency are specified in the PSP for each year.

Task 4 - Fish and Habitat Sampling: July through October each season

This task includes conducting fish and habitat sampling using Ohio EPA methods. Two sampling passes for fish will be conducted at each site, within the seasonal index period of June 16-October 15, and with the passes at least 6 weeks apart. Ideally, fish sampling is best conducted between July and early October. The fish crew leader will also complete a Qualitative Habitat Evaluation Index (QHEI) assessment during the first sampling pass and will review the QHEI and update it as necessary during the second pass. This task also includes the post-field verification of any voucher specimens that are retained including validation by The Ohio State University Museum of Biodiversity Curator of Fishes. The firm must have experience applying the Ohio EPA fish sampling methods within Ohio. The firm must use qualified fish biologists who are Level 3 Qualified Data Collectors (QDCs) for both fish and QHEI. The firm biologists must be familiar with the ecology and taxonomy of fishes in Ohio.

<u>Deliverables</u>: The firm will collect fish, habitat, and macroinvertebrate samples at approximately 30 sites and perform required laboratory analyses. The specific sites and sampling frequency are specified in the PSP each year.

Task 5 - Macroinvertebrate Sampling & Analysis: July through February each season

This task includes the collection of macroinvertebrate samples and the processing of those samples in the firm's laboratory following Ohio EPA methods. Quantitative samples will be collected using modified Hester-Dendy (HD) artificial substrate samplers over a 6-week colonization period within a July 1-Septmber 30 seasonal index period. Ideally stream HD sets are best accomplished during mid-July to mid-September. A qualitative sample is collected at the time the HD sets are retrieved. Each HD sampler is delivered to the firm's laboratory for disassembly and reducing the macroinvertebrate sample. Identification is done to the lowest taxonomic level that is practicable and in accordance with the keys used by Ohio EPA. The firm must have experience applying the Ohio EPA macroinvertebrate methods within Ohio. The firm must use qualified macroinvertebrate taxonomists who are Level 3 Qualified Data Collectors (QDCs) for macroinvertebrate sample collection, data analysis, and identification.

<u>Deliverables</u>: The firm will enter and store the biological and habitat data collected.

Task 6 - Data Management & Analysis: December through March each season

This is a post-field and post-laboratory task that includes the organization and logging of field and lab sheets, entering data, and proofing data entry. The firm will utilize the MSDGC approved version of the Ohio ECOS data management system which has the routines for entering data, calculating the Ohio fish IBI and MIwb, the macroinvertebrate ICI, the QHEI, and the metrics thereof. The data outputs are in the form of database formats (e.g., Excel, Access) and tables. The firm will receive the analyses of chemical water and sediment samples from MSDGC Lab in a database format. The data analyses include exploratory analysis tools, graphics, use attainment status, use attainability analysis, and stressor identification. These analyses provide the basis for conclusions and statements of quality in a comprehensive report for each year.

<u>Deliverables:</u> The firm will provide MSDGC with electronic versions of the Biological and Water Quality Assessment report for each year in support of NPDES permit requirements and in time for MSDGC to meet the June 30 reporting deadline.

Annual Report

An annual report will be prepared for submittal to Ohio EPA NPDES permit deadline of June 30th of the year following the sampling season and for posting on the MSDGC website afterwards. The annual report must detail the aquatic life and recreational use attainment status, the results of use attainability analyses, the delineation of causes and sources of impairments, and analyses of prior collected data and results. These are the baseline outputs to support the NPDES permit monitoring and assessment requirements. For example, the 2016 Mill Creek assessment will cover approximately 60 CSOs/SSOs (including SSO 700) and several other permitted point sources. The report will contain an inventory of these sources and a specific assessment of those that stand out. The following required format is the same as that used for previous annual biological and water quality reports submitted to Ohio EPA and on the MSDGC website. The chemical, habitat, and biological data will be submitted to Ohio EPA per the Ohio Credible Data Law and Regulations after it has been approved by MSDGC.

<u>Deliverables:</u> The firm will deliver complete and quality reports in a timely manner. The firm will use the following outline for the annual report (in addition to a cover page, a table of contents, and appendices):

Executive Summary: A brief synopsis of the findings of the biological assessment including a quantitative description of aquatic life and recreational use attainment and use attainability following Ohio EPA practices and a summary of any trend assessment. Any other pertinent information regarding the bioassessment results in proximity to major sources of pollution and habitat modification will be summarized. Maps of aquatic life and recreational use attainment will be provided.

Section 1 – Introduction: This will describe the purposes and goals of each year's sampling season and in relation to the 2011 biological and water quality assessment plan.

Section 2 – Study Area Description: A description of the study area including a study area map, a list of sites, a description of major pollution sources, dams, and other features that relate to the biological and water quality assessment.

Section 3 – Methods: A description and summary of all chemical, physical, and biological methods used to collect the data, data management, and data analysis including the delineation of impairments, and the approach for determining aquatic life use attainment status.

Section 4 – Results: A reporting of the biological and habitat quality using tables and graphs to report the results. This will include an assessment of exceedances of Ohio water quality criteria, regional reference values, and other biologically relevant thresholds, an analysis of good and modified habitat attributes, and reporting the fish IBI and MIwb and macroinvertebrate ICI and metric results.

Section 5 – Synthesis of Results: This section will report the results of the data analyses conducted under Task 6. This where the conclusions about use attainment status and use attainability will be explained including observations about the trajectory of biological changes in the stream resulting from the comparison of historical results. Understanding

the trajectory of the biological indices and metrics is important in the highly stressed Mill Creek, and other study streams, as the prospects for full recovery, i.e., full attainment of the designated aquatic life uses, is improbable in the near future. The firm will also report on any biological response signatures that are apparent in the data. These can be useful for complementing the fuller analysis of stress/response relationships that are represented in the IPS tool.

Task 7 - Implementation of IPS Dashboard Tool: continuous throughout the contract

This task includes support for implementation of the IPS Dashboard Tool by MSDGC. The IPS tool was developed in 2015 and deployed to MSDGC on December 30, 2015. MSDGC has a list of long-term IPS development needs (see list below) that the scope of work will address; however, there are more opportunities than project budget. Another overarching challenge with the IPS is its inherent complexity making it potentially difficult for some to use effectively, thus additional training will be needed. The IPS dashboard has specific menu features that provide summary results at the site, reach, and HUC12 watershed scales. The significance of this should be emphasized to those involved with capital planning and management of the CSO Consent Decree. Recent work by MSDGC provides an initial opportunity to integrate the IPS tool with the water quality modeling focusing on the SSO 700 segment of Mill Creek. The firm will assist MSDGC in developing priorities for implementation, integration and improvement of the IPS tool.

<u>Deliverables:</u> The firm will respond to MSDGC requests for technical support in a timely manner. The firm will assist MSDGC with prioritizing and addressing the following:

- 1. Training for additional users, i.e., regulators, other MSDGC staff.
- 2. Integrate the IPS with water quality modeling outputs both system and instream simulations.
- 3. Adapt the Stream Stats Network (SSN) to enhance spatial aspects and predictability of IPS outputs.
- 4. Add sediment chemistry to stressor tables and include in revised restorability rankings.
- 5. Add capability to select stressor variable plots for PIR reaches.
- 6. Add the Area of Degradation Value (ADV) to each of the PIR segments. This provides a more quantitative expression of severity & extent of impairments and could be used as a supplemental prioritization variable.
- 7. Add a module for Primary Headwater Habitat (PHWH) classified sites.
- 8. Continue to resolve unnamed streams with local names.
- 9. Perform additional statistical analyses (regression trees, NMDS, SEM, etc.) for stressor analyses.
- 10. More detailed analysis of PAH in sediment separate "common" from more exotic forms and consider how these can be treated in the restorability rankings.
- 11. Determine how to incorporate the stormwater structures layer into IPS.
- 12. Determine how to include the Ohio River mainstem.
- 13. Provide technical assistance as requested by MSDGC.

EXHIBT B - Budget Instream Biological and Water Quality Assessment

Costs by task for the Mill Creek chemical and biological assessment and technical services support in 2016.

Task	Description	Cost
1	Level 3 Project Study Plan (PSP)	\$10,147.94
2	Mobilization/Demobilization	\$ 7, 646 . 76
3	Chemical Water Quality Sampling	\$36,242.20
3A	Collect grab water samples	\$27,333.20
3B	Datasonde deployments	\$4,688.90
3C	Collect sediment samples	\$4,220.10
4	Biological and Habitat Sampling & Laboratory	\$44,865.40
4A	Fish & habitat sampling	\$17,498.70
4B	Macroinvertebrate sampling	\$9,610.40
4C	Biological laboratory processing	\$17,756.30
5	Data Processing & Management	\$7,302.48
6	Data Analysis, Synthesis, & Reporting	\$11,547.00
7	Technical Support Services	\$50,000.00
	TOTAL	\$167,751.78
	Task 1 (certified in separate PO)	-\$10,000.00
	TOTAL 2016 Budget	\$157,751.78

(NOTE: In May, 2016, Task 1 of this agreement was contracted separately via City of Cincinnati PO162P001444. The monies (\$10,000) were also certified separately and that amount has therefore been deducted from the total budget in this agreement. However, that task and corresponding budget item may be re-established and certified in future years of this agreement)